DRAFT

WATERS USED FOR PRODUCTION OF WILD RICE – SANDY LAKE & LITTLE SANDY LAKE (TWIN LAKES)

MPCA Draft Staff Recommendation – July 25, 2013

ISSUE:
Minnesota Rule 7050.0224 identifies a Class 4A water quality standard of 10 mg/L for sulfate, "...applicable to water used for production of wild rice during periods when the rice may be susceptible to damage by high sulfate levels". In order to effectively apply the standard, it needs to be determined whether a particular water is a 'water used for production of wild rice'. Because Minnesota Rule 7050 does not specifically identify all waters used for production of wild rice, this determination needs to be made on a case-by-case basis for most waters.

OBJECTIVE:
This document focuses on the development of a draft MPCA staff recommendation that would identify downstream/downgradient surface waters from the east side of the US Steel Minntac tailings basin site located in Mountain Iron that would be considered 'waters used for production of wild rice' to which the Class 4A sulfate water quality standard would apply. This draft staff recommendation will specifically consider waters located east of the Minntac tailings basin including Little Sandy Lake (69-0729-00) and Sandy Lake (69-0730-00) (Twin Lakes). Waters outside the Sand River watershed such as the Dark River located to the west of the Minntac tailings basin are not considered in this review.

BACKGROUND – US STEEL MINNTAC TAILINGS BASIN:

Dark River Watershed
The US Steel Minntac tailings basin covers approximately 7900 acres and is located in the Rainy River Basin just north of the Laurentian Divide between the Sandy and Dark River Watersheds. The Dark River is downstream/downgradient from the west side of the Minntac tailings basin. Various studies and data compiled by the MPCA from various sources were reviewed for the presence of wild rice in the Dark River watershed. Wild rice was identified approximately 5 miles downstream of the Minntac tailings basin in Dark Lake during a 2012 Minnesota County Biological aquatic plant survey conducted by the DNR and was presented to the MPCA in 2013 as part of a MPCA "Call for Data" request for wild rice information. As a result of this information, the MPCA requested the company to conduct a wild rice survey of the Dark River from its origins near the tailings basin to, and including, Dark Lake during the 2013 field season. Additional information is needed before proceeding with a draft MPCA staff recommendation for the Dark River watershed. A separate staff recommendation for the Dark River watershed will be presented upon completion of wild rice survey work in the Dark River watershed in 2013

Sand River Watershed

The headwaters of the Sand River is downstream/downgradient of the east side of the Minntac tailings basin. The Sand River continues for approximately 12 miles through Admiral Lake (69-1392-00) and through and past the Little Sandy and Sandy Lakes (Twin Lakes), to its confluence with the Pike River. The Pike River continues north and ultimately flows into Pike Bay of Lake Vermillion.

WATERS CONSIDERED FOR DRAFT STAFF RECOMMENDATION:

- Admiral Lake (~ 14 acres) is located approximately ¼ mile to the east of the tailings basin and drains to the Twin Lakes.
- Sandy Lake (~114 acres) is located approximately 1.5 miles northeast of the tailings basin and is the headwaters for the Sand River. It is connected to Little Sandy Lake (~ 83 acres) by a deep canal.

SUPPORTING DOCUMENTATION

Various studies have been conducted in the Sand and Pike River Watersheds over the past several years. The following information was reviewed to determine a draft staff recommendation regarding 'waters used for production of wild rice':

- *Minntac Water Inventory Reduction – Draft EIS, September 2004.*
- *Minntac Water Inventory Reduction EIS Wild Rice Technical Memorandum, September 2004.*
- *Natural Wild Rice in Minnesota – A Wild Rice Study document submitted to the Minnesota Legislature by the Minnesota Department of Natural Resources, February 15, 2008.*
- *Sandy Lake and Little Sandy Lake Monitoring (2010-2012) Technical Report 12-05, Prepared for the Bois Forte Reservation by Darren Vogt, 1854 Treaty Authority, December 2012.*

PRELIMINARY DRAFT STAFF RECOMMENDATION: SANDY LAKE & LITTLE SANDY LAKE (TWIN LAKES)

1) The Sandy River, from its origins at the Minntac tailings basin through Admiral Lake to the inlet to the Twin Lakes is not a water used for production of wild rice.

   RATIONALE: Review of the studies identified above did not indicate wild rice to be present from the outlet of the Minntac tailings basin to the inlet of the Twin Lakes. Wild rice was also not identified in Admiral Lake.

2) Little Sandy and Sandy Lake, also known as Twin Lakes, is a water used for production of wild rice.

   RATIONALE: Wild rice is in the Twin Lakes is documented in the Sandy Lake and Little Sandy Lake Monitoring (2010-2012) Technical Report and the Minntac Water Inventory Reduction Draft EIS. The Minntac Draft EIS states "historical references cite that, in 1982 there existed 121 acres of wild rice in Sandy Lake and 89 acres of wild rice in Little Sandy Lake". The Sandy Lake

and Little Sandy Lake Monitoring Technical Report identifies various locations within the Twin Lakes where wild rice has been observed in various field studies in 2006, 2007, 2010, 2011 and 2012. Wild rice is also identified in Sandy Lake and Little Sandy Lake in Appendix B of the 2008 DNR Report.

DRAFT STAFF RECOMMENDATION REVISIONS – ADDITIONAL INFORMATION

This draft MPCA staff recommendation for the east side of the US Steel Minntac taiings basin is based on information currently available. MPCA staff will consider additional information that may become available in the future, whether from project proposers or from other interested/affected parties, and reserves the right to modify the draft staff recommendation accordingly.

ATTACHMENTS:

MPCA Generated Topographic Map of Permitted Facility – US Steel Minntac Tailings Basin.

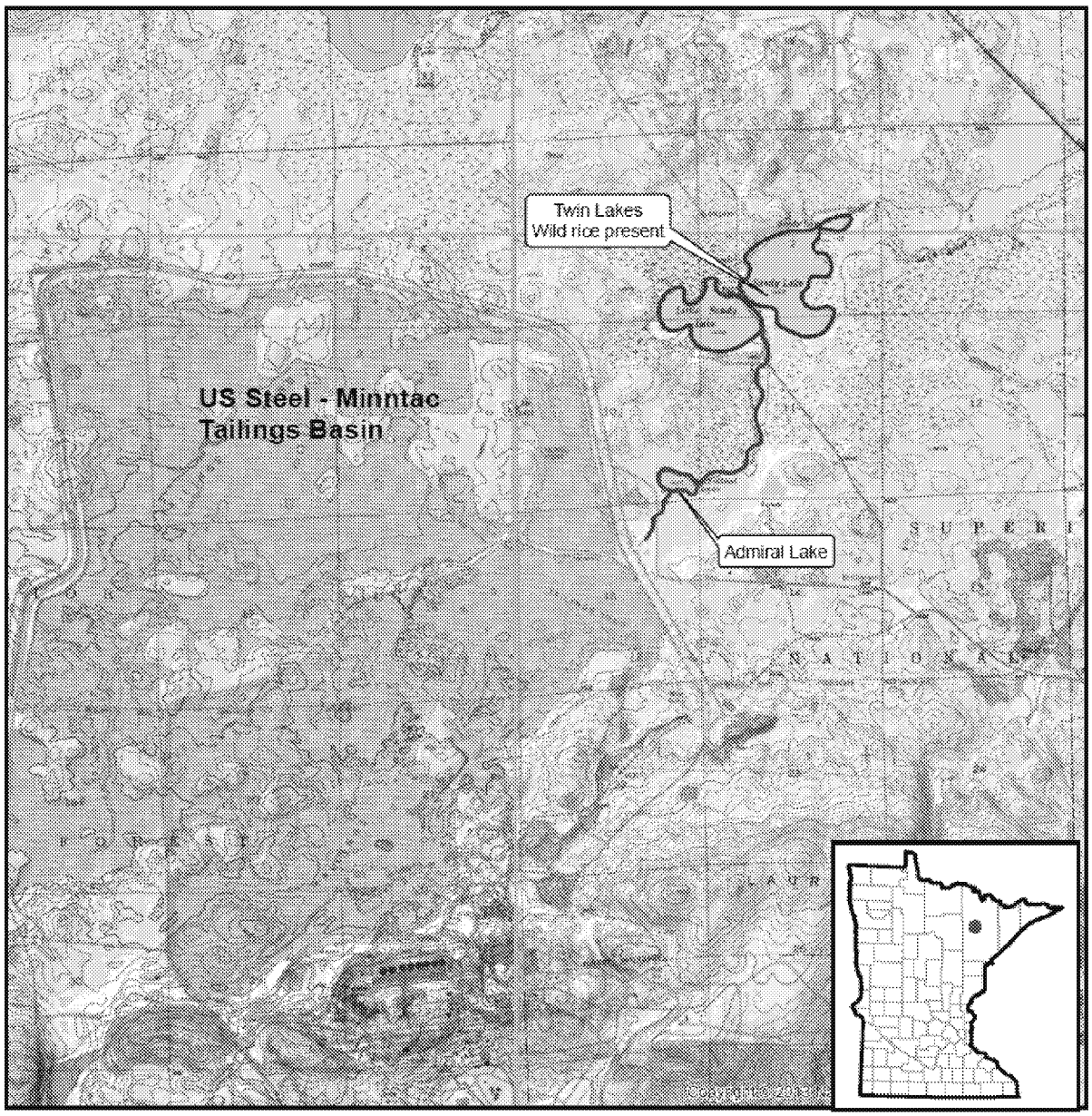
Figure 10: Wild Rice Locations in the Twin Lakes in 2006, *Sandy Lake and Little Sandy Lake Monitoring (2010-2012) Technical Report 12-05.*

SUPPORTING FIGURES

Attachment 1: MPCA generated map – Minntac Tailings Basin and Twin Lakes

DRAFT STAFF RECOMMENDATION

Waters Used for Production of Wild Rice
US Steel - Minntac Tailings Basin
Sand River Watershed



Map produced by: MPCA Staff, 7/16/13
Source: Virginia, Britt, Kinney & Idington USGS Quads
Scale: 1:50,000

0 0.5 1 2 Miles

Attachment 2: Figure 10 Wild Rice Locations in the Twin Lakes in 2006, *Sandy Lake and Little Sandy Lake Monitoring (2010-2012) Technical Report 12-05*

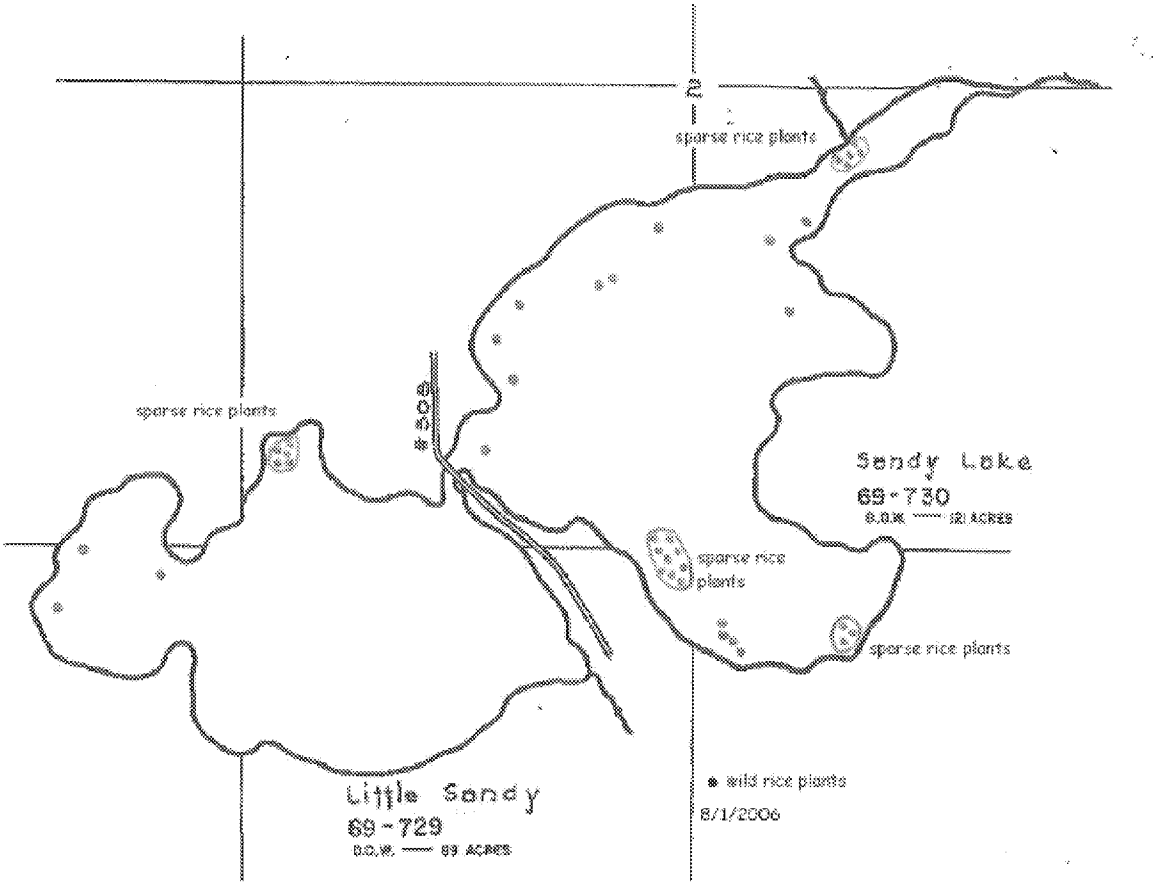


Figure 10: Wild Rice Locations in the Twin Lakes in 2006